Docket No.: <u>110346-201 US1</u>   <u>PATENT/OFFICIAL</u>

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Sumner *et al.*   :

Serial No. 09/521,242   : Group Art Unit: 2121

Filed: April 5, 2000   : Examiner: George B. Davis

For: COMPUTER ARCHITECTURE AND PROCESS OF PATIENT
       GENERATION, EVOLUTION, AND SIMULATION FOR
       COMPUTER BASED TESTING SYSTEM USING
       BAYESIAN NETWORKS AS A SCRIPTING LANGUAGE

Assistant Commissioner for
Patents and Trademarks
Washington, D. C. 20231

Declaration of Miroslaw Truszczynski, M.D. and Victor W. Marek, M.D. Under 37 C.F.R. § 1.132

Dear Sir:

In response to the Office Action dated July 8, 2003, we, Miroslaw Truszczynski, Ph.D. and Victor W. Marek, Ph.D., declare as follows:

1.   As stated in our Declaration, we are two of the three co-authors of a journal article entitled "Simulating Patients with Parallel Health State Networks" by Miroslaw Truszczynski, Ph.D., Victor Marek, Ph.D., and Walton Sumner II, M.D. published in Sumner II et al. *Proceedings of the American Medical Informatics Association Annual Symposium* p.1939-1942 (November, 1998) (hereinafter "Sumner II et al.").

2.   The work described in the Sumner II *et al.* paper cited by the Examiner against this Application describes the work of the Applicants of the above-identified patent application (hereinafter "Application"), Walton Sumner II, M.D. and Michael D. Hagen, M.D.

3.   We did not conceive of the work described in the Sumner II *et al.* paper, rather, we were supervised by the Applicants and performed this work under their direction.

4. While we were named as co-authors in the Sumner II *et al.* paper for our technical assistance to the work we did not contribute to the conception of the methods claimed in the Application and, thus, are not named as co-inventors of the Application.

5. We did not conceive of the work of the subject matter claimed in the application as recited in the pending claims, a copy of which is attached herewith. For example, pending claim 1 recites:

A method for evaluating or educating a user comprising the steps of:

(a) generating a plurality of parallel health state networks;

(b) generating at least one first Bayesian network which describes each of the plurality of parallel state networks;

(c) generating at least one second Bayesian network which describes rates of progression within and/or between said plurality of parallel health state networks, and describes task factors that affect the rates of progression;

(d) generating at least one third Bayesian network which supports reveal structures to limit display of patient test data to patient test data specifically request by the user;

(e) generating at least one fourth Bayesian network which supports plan critiques of queries of an treatment prescribed by the user;

(f) scripting a knowledge base from the at least one first Bayesian network and the at least one second Bayesian network;

(g) instantiating a model patient, at least in part, from the scripted knowledge base;

(h) receiving one of a course of action and a query for a specific medical finding concerning the model patient from the user responsive to the instantiated model patient;

(i) displaying, if the query is received, the specific medical finding to the user based at least in part on the at least one third Bayesian network, and repeating step (h);

(j) evolving the model patient in accordance with the plurality of parallel health state networks and responsive to the received course of action;

(k) repeating the steps (h) through (j) until the user has completed treatment of the model patient;

(l) generating an optimum combination of treatment and queries based, at least in part, on the at least one fourth Bayesian network and the instantiated model patient; and

(m) evaluating the query and the treatment by the user in comparison to the generated optimum combination of treatment and queries.
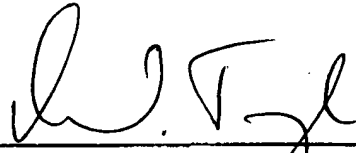
As mentioned above, we were not involved in the conception of claim 1 or the remaining pending claims 1-49.

6.   We further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.
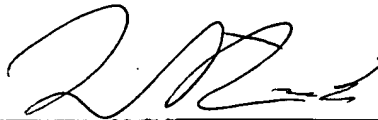
11/17/2003

Date

Miroslaw Truszczynski, Ph.D.

11/17/2003

Date

Victor W. Marek, Ph.D.

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